



1,1-DICHLOROETHENE

What is 1,1-DICHLOROETHENE?

1,1-Dichloroethene is a man-made, colorless liquid. 1,1-Dichloroethene, also called vinylidene chloride, turns into a vapor quickly at room temperature. It has a mild, sweet smell and burns fast.

Where is 1,1-dichloroethene found and how is it used?

This chemical is used to make certain plastics. Examples are packaging products or flexible films such as plastic wrap. 1,1-Dichloroethene is also used to make coatings that resist fire. These coatings are used for fiber and carpet backing. Other uses for this chemical are for piping, coating for steel pipes and in adhesive applications.

How can people be exposed to 1,1-dichloroethene?

You could be exposed to 1,1-dichloroethene through:

Breathing 1,1-dichloroethene vapors if you work where it is made or used. You can breathe this chemical in air if you live near a factory where it is made or used, or if you live near a waste or disposal site.

Drinking 1,1-dichloroethene in ground water or drinking water contaminated with the chemical. Eating food contaminated with 1,1-dichloroethene.

Touching 1,1-dichloroethene in the workplace and contaminated soil.

How does 1,1-dichloroethene work and how can it affect my health?

People who breathed high levels of 1,1-dichloroethene in a closed space lost their breath and fainted. Some people who inhaled the chemical at work for several years had problems with liver function. Exposure to other chemicals may have also contributed to this effect. Breathing 1,1-dichloroethene over long periods may harm the nervous system and damage the liver and kidneys. Studies in animals show that exposure to 1,1-dichloroethene may also affect the lungs and heart.

There is no information on the health effects in humans who ate food or drank water containing 1,1-dichloroethene. Animals exposed in this way had liver or kidney diseases and some died. However, the levels of exposure were much higher than would occur in drinking water supplies. In other animal studies, eye contact and skin contact with 1,1-dichloroethene caused irritation in those areas. It is not known if exposure to 1,1-dichloroethene increases the risk of cancer in humans.

How is 1,1-dichloroethene poisoning treated?

There is no treatment just for exposure to 1,1-dichloroethene. A doctor will treat the symptoms. In all cases of poisoning, seek medical treatment. A doctor may prescribe a different treatment depending on circumstances of the poisoning and symptoms.



Frequently Asked Questions

What should I do if exposed to 1,1-dichloroethene?

If you are exposed to 1,1-dichloroethene, many factors will determine whether harmful health effects will occur and the type and severity of those health effects. These factors include the dose (how much), the duration (how long), the route or pathway by which you are exposed (breathing, eating, drinking, or skin contact), the other chemicals to which you are exposed, and your age, gender, nutritional status, family traits, lifestyle, and state of health.

If you breathe 1,1-dichloroethene, get fresh air and rest. Then, get medical help.

If you touch 1,1-dichloroethene, rinse your skin with plenty of water or shower. Get medical help.

If you get 1,1-dichloroethene in your eyes, rinse with plenty of water for several minutes. Take out your contact lenses if you can do it easily. Get medical help.

What factors limit use or exposure to 1,1-dichloroethene?

In the workplace, limit exposure by using safe work practices. Proper ventilation is needed. Wear protective clothing. In areas where the water supply is contaminated, drink bottled water.

Is there a medical test to show whether I've been exposed to 1,1-dichloroethene?

Tests are available to measure levels of 1,1-dichloroethene in breath, urine, and body tissues. These tests are not usually available in your doctor's office. However, a sample taken in your doctor's office can be sent to a special laboratory if necessary.

Because 1,1-dichloroethene leaves the body fairly quickly, these methods are useful only for finding exposures that have occurred within the last few days. These tests can't tell you if adverse health effects will occur from exposure to 1,1-dichloroethene.

Technical information for 1,1-dichloroethene

CAS Number: 75-35-4

Chemical Formula: $C_2H_2Cl_2$

Carcinogenicity (EPA): 1,1-dichloroethene has been classified as a possible human carcinogen.

MCL (Drinking Water): 0.007 parts of 1,1-dichloroethene per million parts of water.

OSHA Standards: 1 part million in air (approximately 4 mg/m³).

NIOSH Standards: NIOSH recommends that the concentration in air be as low as possible.

References and Sources

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24/7 Emergency Contact Number: 1-888-295-5156

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